

## REMARKS

Applicants submit these remarks in response to the Office Action dated December 14, 2005. In the Office Action, claims 1-56 stand rejected under 35 USC § 103. Applicants have amended claim 21 to overcome an objection. No new matter was added by this amendment. Applicants request that the following remarks be considered and that the rejections be reconsidered and withdrawn.

In the Office Action, claim 21 stands objected to because of the typographic error in the phrase “is receives.” Applicants have amended claim 21 to correct the claim.

In the Office Action claims 1-6, 8, 11-23, 25, 26, 28-32, 34-37, 39, 42-48 and 50-56 stand rejected as allegedly being unpatentable under 35 USC 103(a) over *Lee* (U.S. Patent 4,789,801) in view of *Natarajan* et al. (U.S. Patent 4,264,343). In response to Applicants’ argument that there is no motivation to combine *Lee* and *Natarajan*, the Office Action points to the fact that *Lee* discloses the use of the device therein as an electrostatic precipitator and points to the fact that *Natarajan* shows the occurrence of sparking or arcing when additional electrodes are used downstream from the emitted electrodes if not embedded in a dielectric material. (Office Action, pp. 3-4). Applicant respectfully disagrees with the Office Action’s assertion that this creates a motivation to combine as: (1) there is no suggestion of a problem to be solved (arcing or sparking of uninsulated electrodes) in *Lee* which would have led one of ordinary skill in the art to combine *Lee* with a reference teaching insulated electrodes and (2) the antithetical principles of operation of *Lee* and *Natarajan* would have deterred one of ordinary skill in the art from combining the references.

As stated in Applicant’s October 3, 2005 Response, of the rejected claims only Claims 1, 14, 19, 31, 34, 45, 50 and 53 are independent and each independent claim requires an insulated driver electrode in an electro-kinetic air transporter-conditioner system. Claim 49, which also is independent contains the same limitation. Applicants again respectfully submit that the invention is not obvious because there is no motivation to combine *Lee* with *Natarajan* to arrive at the claimed invention. Obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion or motivation to do so found either explicitly or implicitly in the references themselves or in the knowledge generally available to one of ordinary skill in the art. Moreover, the mere fact that the references can be combined or modified does not render the resultant

combination obvious unless the prior art also suggests the desirability of making the combination.

*Lee*, the primary reference, makes no express or implicit indication that there was any problem regarding arcing or sparking created by uninsulated electrodes and fails to even mention arcing or sparking between electrodes in any context. As such, *Lee* provides no motivation for the combination.

*Natarajan* issued in 1981, six years before the *Lee* patent was filed. Should any advantage have been offered by the combination of *Natarajan* with *Lee*, then *Lee* could have incorporated any useful teachings of *Natarajan*. Clearly, no apparent advantage was apparent to *Lee* when the *Lee* application was filed in 1987. *Lee* speaks for what references one skilled in the art would actually look to by failing to recognize an arcing problem and not incorporating insulated electrodes, which were known, into its device. Additionally, U.S. Application No. 60/369,554 to *Lee* ("*Lee-2*"), which was filed on April 1, 2002, still lacks disclosure of the use of insulated driver electrodes or any problem created by arcing or sparking. Thus, as of April 1, 2002, more than 21 years after issuance of *Natarajan*, *Lee* himself did not teach or suggest that there would be any advantage to insulating its driver electrodes in electro-kinetic air transporter-conditioner systems. Nor are Applicants aware of anyone else who did. Since *Lee* did not teach or suggest the use of insulated driver electrodes or indicate that there were any problems associated with the use of uninsulated driver electrodes (which would speak to desirability to combine), it simply cannot be said that one of ordinary skill in the art would have appreciated an advantage in the combination of *Lee* with *Natarajan*, as would be required to make insulated driver electrodes obvious. Consequently, Applicants request that the basis for this rejection be reconsidered and the rejection be withdrawn.

Further, the antithetical principles of operation of *Lee* and *Natarajan* would hinder one of ordinary skill from combining them. See *Uniroyal, Inc. v. Rudkin-Wiley Corp.*, 837 F.2d 1044, 1052 (Fed. Cir. 1988) (finding no motivation to combine where one reference was based on the wind resistance principle that a "shield, if placed in front of a large bluff body, will deflect the airstream away from the front of the bluff body thereby reducing the air resistance" and the other reference was based on the "principle of streamlining, the antithesis of [the first reference]"). The *Natarajan* device, a particle precipitator for use in cleaning gas streams, relies on the kinetic energy already present in a gas for gas movement through its device and does not appear to have

any significant capability to impart kinetic energy to gases to cause them to move through its device. In contrast, the present electro-kinetic air transporter conditioner systems impart kinetic energy to air causing it to move through the device. The design considerations for an electro-kinetic air transporter-conditioner devices are distinct from those in precipitators because the principles of operation of the devices are antithetical. When the gas entering a device, such as the *Natarajan* device, already has sufficient kinetic energy; the device is substantially more tolerant of components (and their dimensions) positioned in the gas stream. In an electro-kinetic device, which imparts a small amount of kinetic energy to a gas to move it through the device, there is little tolerance. Therefore, the art involved with particle precipitators is not generally useful to the art of electro-kinetic air transporter-conditioner systems.

Claim 49 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over *Lee*, *Natarajan* and *Weinberg*, and further in view of *Satyapal et al.* (U.S. Patent No. 5,879,435). Claim 49 includes the limitation requiring an insulated driver electrode and is not obvious for the reasons set forth above for independent Claims 1, 14, 19, 31, 34, 45, 50 and 53. Specifically, there is no motivation to combine *Lee* with *Natarajan*, or with *Weinberg* and *Satyapal* in such a manner as to obtain the claimed invention which requires, among other things, an insulated driver electrode. Accordingly, Applicants respectfully request that the obviousness rejection of claim 49 be reconsidered and withdrawn.

Applicants submit that independent Claims 1, 14, 19, 31, 34, 45, 49, 50 and 53 are allowable in their present form. In addition, the remaining claims which all depend from these independent claims are allowable for at least the same reasons as the claims from which they depend, respectively. For these reasons, Applicants respectfully submit that the present application is in condition for allowance and earnestly solicit that the application be promptly passed to issue.

The Examiner is respectfully requested to telephone the undersigned if he can assist in any way in expediting prosecution of this application. The Commissioner is authorized to charge any underpayment of fees or credit any overpayment of fees to Deposit Account No. 02-1818 (order no. 112440-713) for any matter in connection with this response, including any fee for extension of time, which may be required.

Respectfully submitted,  
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